AMENDMENTS TO THE CLAIMS

Pursuant to 37 C.F.R. § 1.121 the following listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Original) A method of transmitting data of at least two packets to provide inter-packet interleaving, the method comprising the following steps:

inputting data of a first packet, said first packet data comprising a plurality of symbols;

inputting data of a second packet, said second packet data comprising a plurality of symbols;

utilizing a plurality of tones, each tone at a different frequency, to transmit the plurality of first packet data symbols and the plurality of second packet data symbols;

delaying the transmission of successive ones of said first packet data symbols over time; and

delaying the transmission of successive ones of said second packet data symbols over time,

such that during at least one symbol period, said tones are transmitting at least one first packet data symbol and at least one second packet data symbol.

2. (Original) The method of claim 1, wherein said plurality of tones include tones having different bit loading.

3. (Original) The method of claim 1, wherein each of said plurality of tones transmits a single data symbol during a single symbol period.

4. (Original) The method of claim 1, wherein said delaying steps delay each successive symbol by a predefined time period.

5. (Original) The method of claim 4, wherein said predefined time period is substantially uniform for all data symbols.

6. (Original) The method of claim 5, wherein said predefined time period corresponds to a single symbol time period.

7. (Original) The method of claim 1, wherein said packet data is modulated in accordance with DMT modulation.

8. (Original) The method of claim 1, wherein said packet data is modulated in accordance with VCMT.

9. (Original) The method of claim 5, wherein said first packet data symbols are arranged as one or more diagonal arrangement of symbols when viewed over time.

10. (Original) The method of claim 9, wherein said one or more diagonal arrangement of symbols are grouped into a group.

11. (Original) The method of claim 9, wherein said second packet data symbols are arranged as one or more diagonal arrangement of symbols when viewed over time, and

wherein a first symbol of said first packet diagonal arrangements is transmitted earlier in time with respect to a first symbol of said second packet diagonal arrangements.

12. (Original)   A method of transmitting data of at least two packets to provide inter-packet interleaving, the method comprising the following steps:

inputting data of a first packet, said first packet data comprising a plurality of symbols;

inputting data of a second packet, said second packet data comprising a plurality of symbols;

utilizing a plurality of modulation codes to transmit the plurality of first packet data symbols and the plurality of second packet data symbols;

delaying the transmission of successive ones of said first packet data symbols over time; and

delaying the transmission of successive ones of said second packet data symbols over time,

such that during at least one symbol period, said modulation codes are transmitting at least one first packet data symbol and at least one second packet data symbol.

13. (Original) The method of claim 12, wherein said plurality of modulation codes comprise a set of orthogonal modulation codes.

14. (Original) The method of claim 12, wherein each of said plurality of modulation codes transmits a single data symbol during a single symbol period.

15. (Original) The method of claim 12, wherein said delaying steps delay each successive symbol by a predefined time period.

16. (Original) The method of claim 15, wherein said predefined time period is substantially uniform for all data symbols.

17. (Original) The method of claim 16, wherein said predefined time period corresponds to a single symbol time period.

18. (Original) The method of claim 12, wherein said packet data is modulated in accordance with CDMA modulation.

19. (Original) The method of claim 16, wherein said first packet data symbols are arranged as one or more diagonal arrangement of symbols when viewed over time.

20. (Original) The method of claim 19, wherein said one or more diagonal arrangement of symbols are grouped into a group.

21. (Original) The method of claim 19, wherein said second packet data symbols are arranged as one or more diagonal arrangement of symbols when viewed over time, and wherein a first symbol of said first packet diagonal arrangement is transmitted earlier in time with respect to a first symbol of said second packet diagonal arrangement.

Claims 22-53 (Canceled)

54. (Original) The method of claim 4 wherein the step of interleaving and arranging arranges the second encoded data according to one of rows and columns.

55. (Original) The method of claim 14 wherein the step of interleaving and arranging arranges the second encoded data according to one of rows and columns.

56. (Original) The method of claim 18 wherein the step of interleaving and arranging arranges the second encoded data according to one of rows and columns.

Claim 57 (Cancelled)

58. (Original) An apparatus for transmitting data of at least two packets to provide inter-packet interleaving, comprising:

means for inputting data of a first packet, said first packet data comprising a plurality of symbols;

means for inputting data of a second packet, said second packet data comprising a plurality of symbols;

means for utilizing a plurality of tones, each tone at a different frequency, to transmit the plurality of first packet data symbols and the plurality of second packet data symbols;

means for delaying the transmission of successive ones of said first packet data symbols over time; and

means for delaying the transmission of successive ones of said second packet data symbols over time,

such that during at least one symbol period, said tones are transmitting at least one first packet data symbol and at least one second packet data symbol.

59. (Original) An apparatus for transmitting data of at least two packets to provide inter-packet interleaving, comprising:

means for inputting data of a first packet, said first packet data comprising a plurality of symbols;

means for inputting data of a second packet, said second packet data comprising a plurality of symbols;

means for utilizing a plurality of modulation codes to transmit the plurality of first packet data symbols and the plurality of second packet data symbols;

means for delaying the transmission of successive ones of said first packet data symbols over time; and

means for delaying the transmission of successive ones of said second packet data symbols over time,

such that during at least one symbol period, said codes are transmitting at least one first packet data symbol and at least one second packet data symbol.

Claims 60-68 (Cancelled)